SA-WX900

SERVICE MANUAL

Ver. 1.2 2005.07

US Model
Canadian Model
AEP Model
UK Model

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS
For the U.S.A. model
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 4 ohm loads, from 20 – 200 Hz; rated 800 watts, minimum RMS power, with no more than 0.8 % total harmonic distortion from 250 milliwatts to rated output.

System
Type
Active Subwoofer, magnetically shielded (closed cabinet)
Speaker units
Woofer : 30 cm dia. (12 in.), cone type x 2
Continuous RMS output
North American model
(4 ohms/100Hz, 0.8%) : 1,000 W
European model (DIN 4 ohms/100Hz, 0.8%) : 1,000 W
Reproduction frequency range
20 Hz – 200 Hz
High frequency cut-off frequency
50 Hz – 200 Hz
Phase selector
NORMAL, REVERSE
Mode selector
MOVIE, MUSIC
BASS-BOOST OFF, 1, 2

Inputs
Input jacks
LINE IN: input pin jack
SPEAKER IN: input terminals
Output jacks
LINE OUT: output pin jack
SPEAKER OUT: output terminals

General
Power requirements
North American model : 120 V AC, 60 Hz
European model : 220 – 240 V AC, 50 Hz
Other models : 220 – 240 V AC, 50 Hz
Power consumption
220 W
less than 0.5 W (Standby mode)

Dimensions
Approx. 440 x 550 x 620 mm
(17 $^{3}/_{8}$ x 21 $^{7}/_{8}$ x 24 $^{1}/_{2}$ in.) (w/h/d)

Mass
48 kg (105lb 14oz)
Supplied accessories
Audio connecting cord
(1 phono plug – 1 phono plug) (1)
Speaker cords (2)
Spike
Design and specifications are subject to change without notice.

ACTIVE SUBWOOFER

9-961-097-03
2005G02-1
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Sony Corporation
Home Audio Group
Published by Sony Engineering Corporation

SONY®

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth Ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

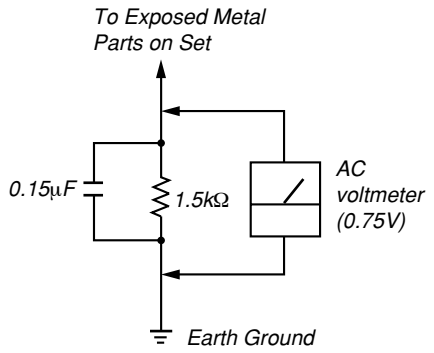

Fig. A. Using an AC voltmeter to check AC leakage.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

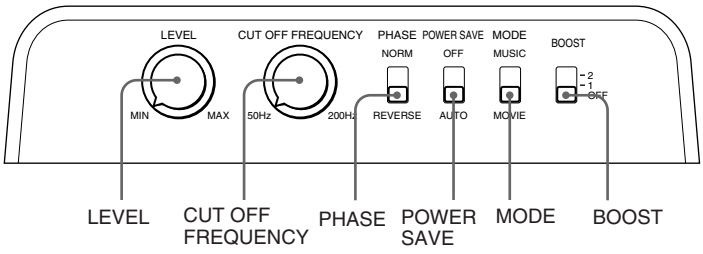
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

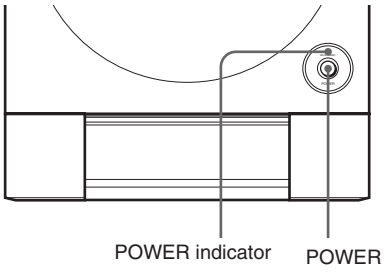
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

This section is extracted from instruction manual.

• Location of controls





SECTION 2
DIAGRAMS

THIS NOTE IS COMMON FOR SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Schematic Diagrams.
Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

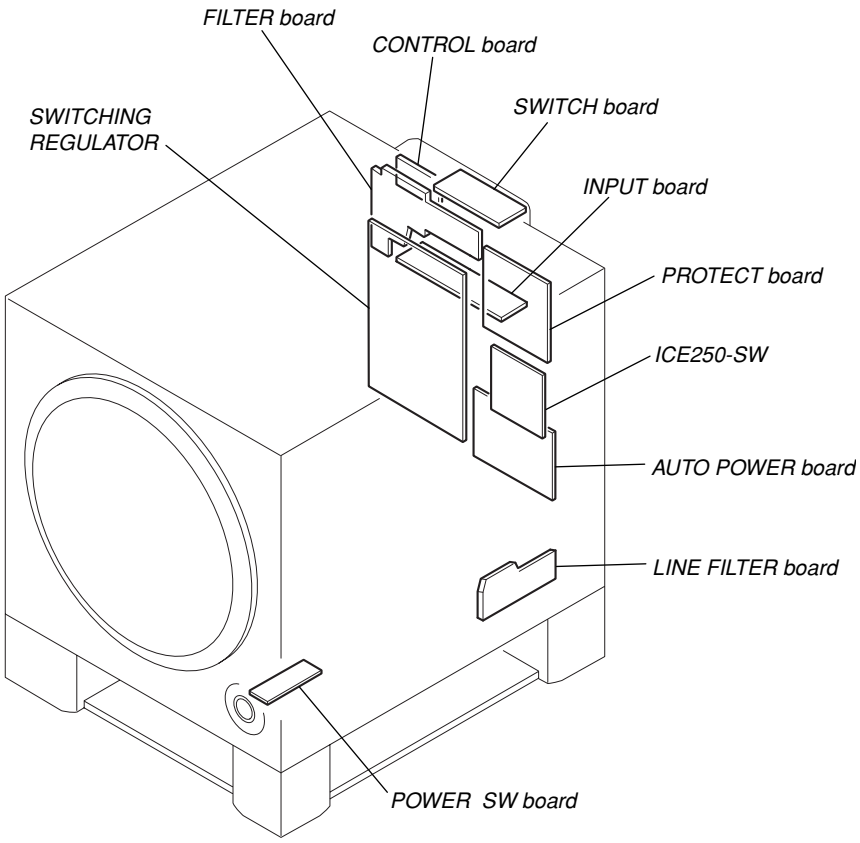
- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B– Line.
- Voltages are dc with respect to ground under no-signal conditions.
- no mark : Power on
- Voltages are taken with a VOM (Input impedance 10 MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : AUDIO
- Abbreviation
  CND : Canadian model

For printed wiring boards.
Note:

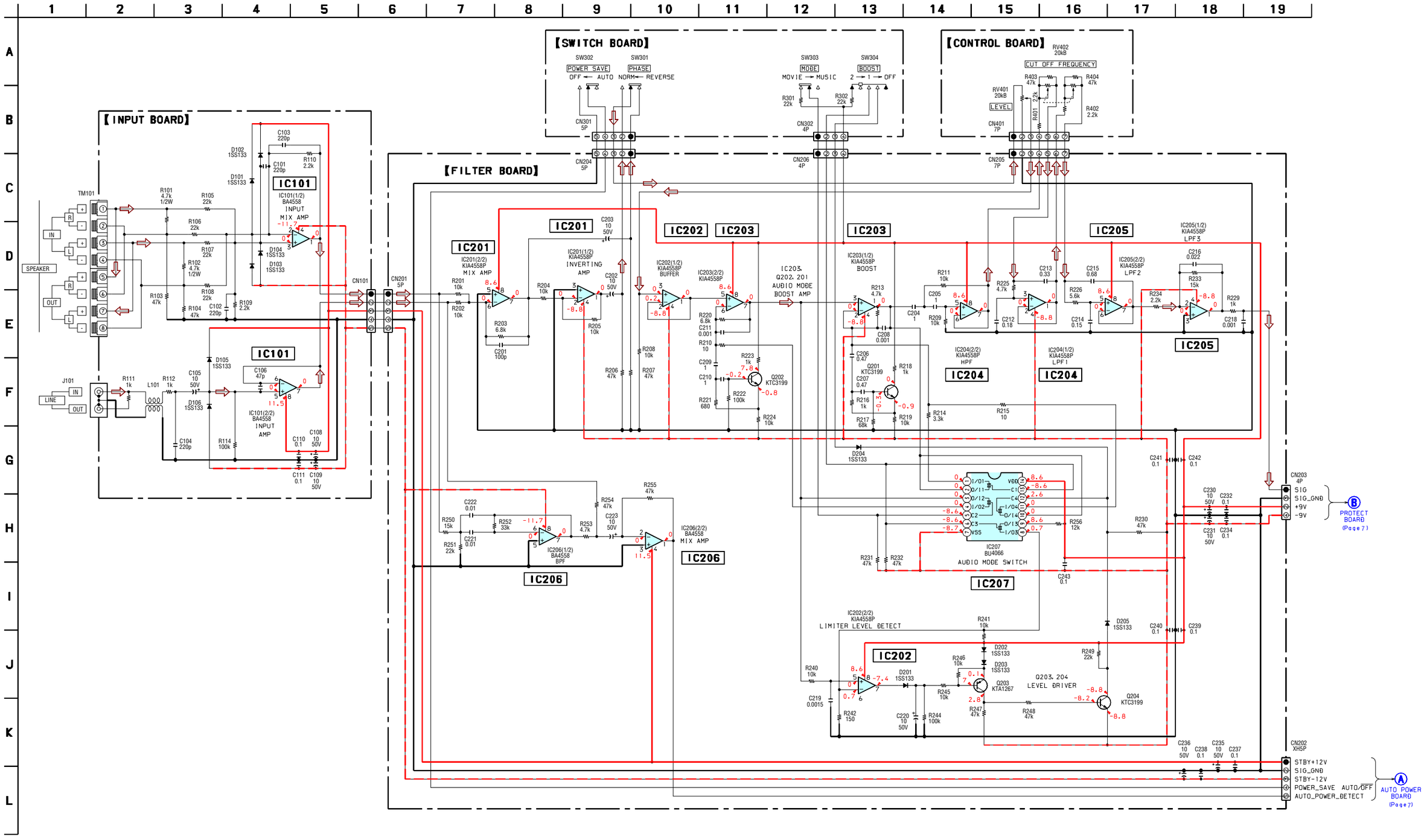
- o——— : parts extracted from the component side.
- ▬ : Pattern from the side which enables seeing.

- Abbreviation
  CND : Canadian model

2-1. CIRCUIT BOARDS LOCATION



2-2. SCHEMATIC DIAGRAM –FILTER SECTION –



2-3. Printed Wiring Board – FILTER SECTION – • See page 4 for Circuit Boards Location.

【FILTER BOARD】

【CONTROL BOARD】

【INPUT BOARD】

【SWITCH BOARD】

AUTO POWER BOARD (Page 8) Ⓐ

Ⓑ PROTECT BOARD (Page 8)

TM101 SPEAKER

J101 L NE

1-860-440-

1-860-442-

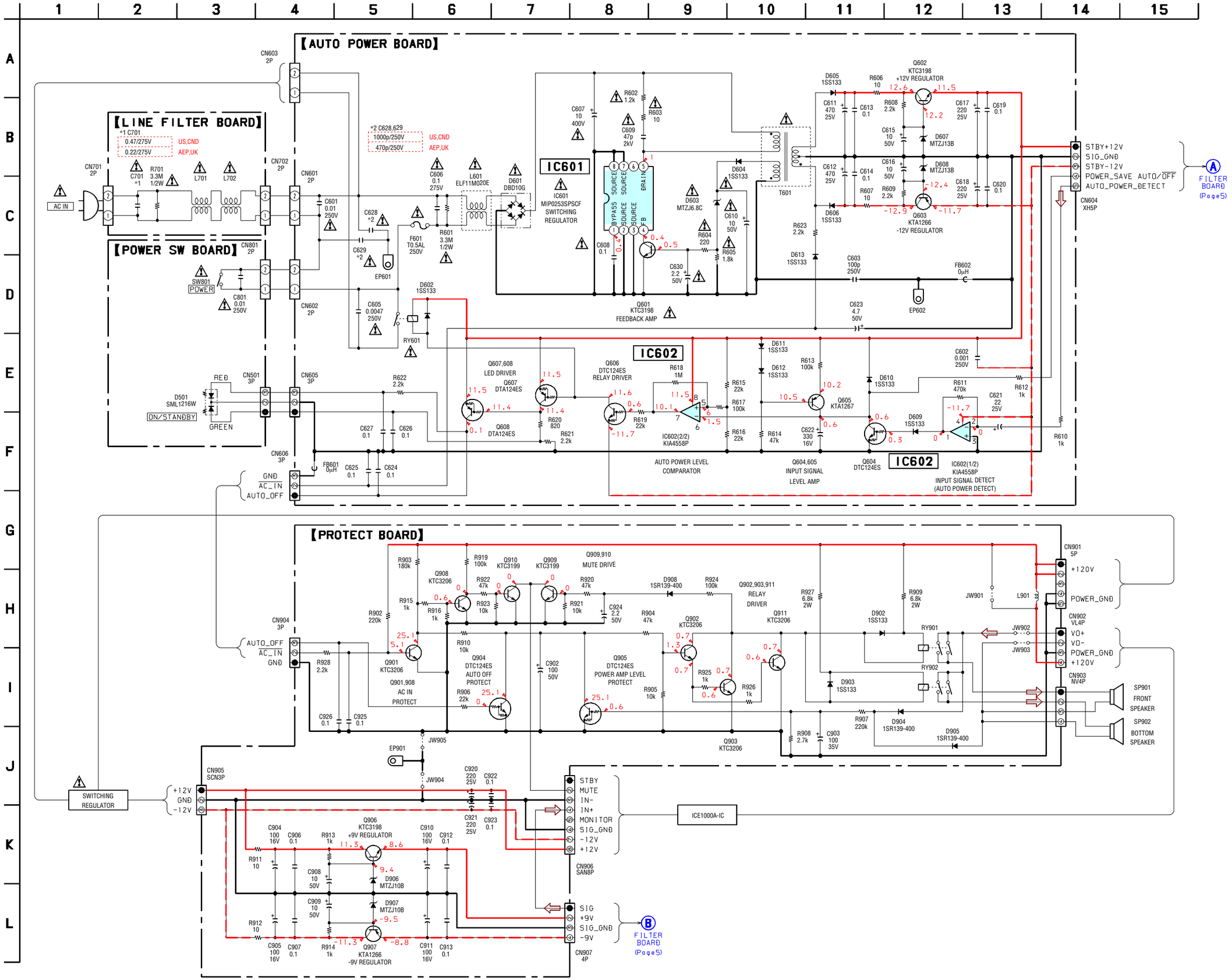
1-860-439-

1-860-441-

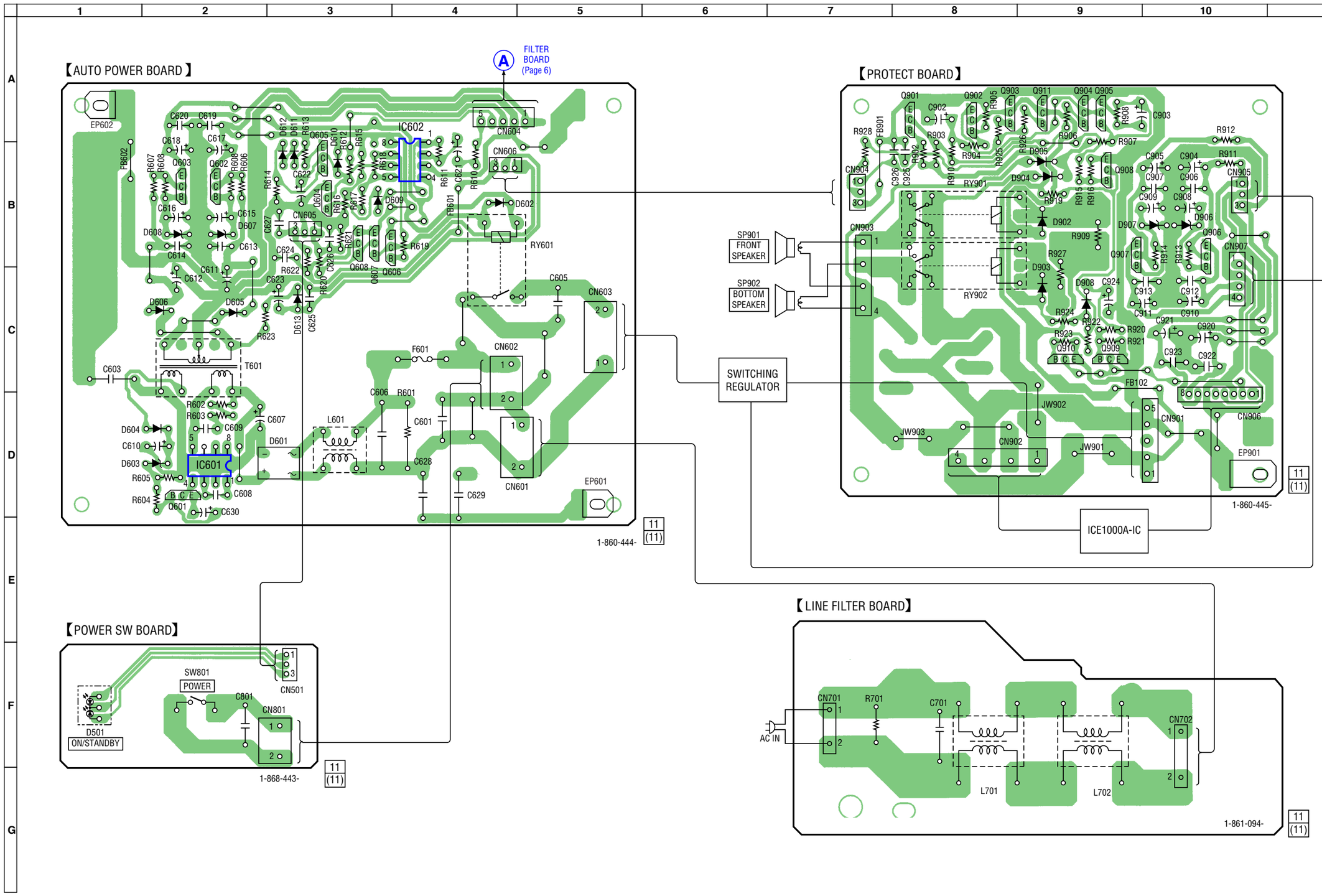
• **Semiconductor Location**

Ref. No.	Location
D101	F-3
D102	F-4
D103	F-3
D104	F-4
D105	F-3
D106	F-2
D201	B-1
D202	A-2
D203	A-2
D204	A-4
D205	A-2
IC101	F-3
IC201	C-1
IC202	B-2
IC203	B-3
IC204	B-5
IC205	B-6
IC206	C-2
IC207	A-2
Q201	B-4
Q202	B-2
Q203	B-1
Q204	A-1

2-4. SCHEMATIC DIAGRAM –POWER SECTION –



2-5. Printed Wiring Board – POWER SECTION – • See page 4 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
D501	F-1
D601	D-3
D602	B-4
D603	D-2
D604	D-2
D605	C-2
D606	C-2
D607	B-2
D608	B-2
D609	B-3
D610	B-3
D611	B-3
D612	B-3
D613	C-3
D902	B-9
D903	C-9
D904	B-9
D905	B-9
D906	B-10
D907	B-10
D908	C-9
IC601	D-2
IC602	B-4
Q601	D-2
Q602	B-2
Q603	B-2
Q604	B-3
Q605	B-3
Q606	B-3
Q607	B-3
Q608	B-3
Q901	A-8
Q902	A-8
Q903	A-8
Q904	A-9
Q905	A-9
Q906	B-10
Q907	B-9
Q908	B-9
Q909	C-9
Q910	C-9
Q911	A-9

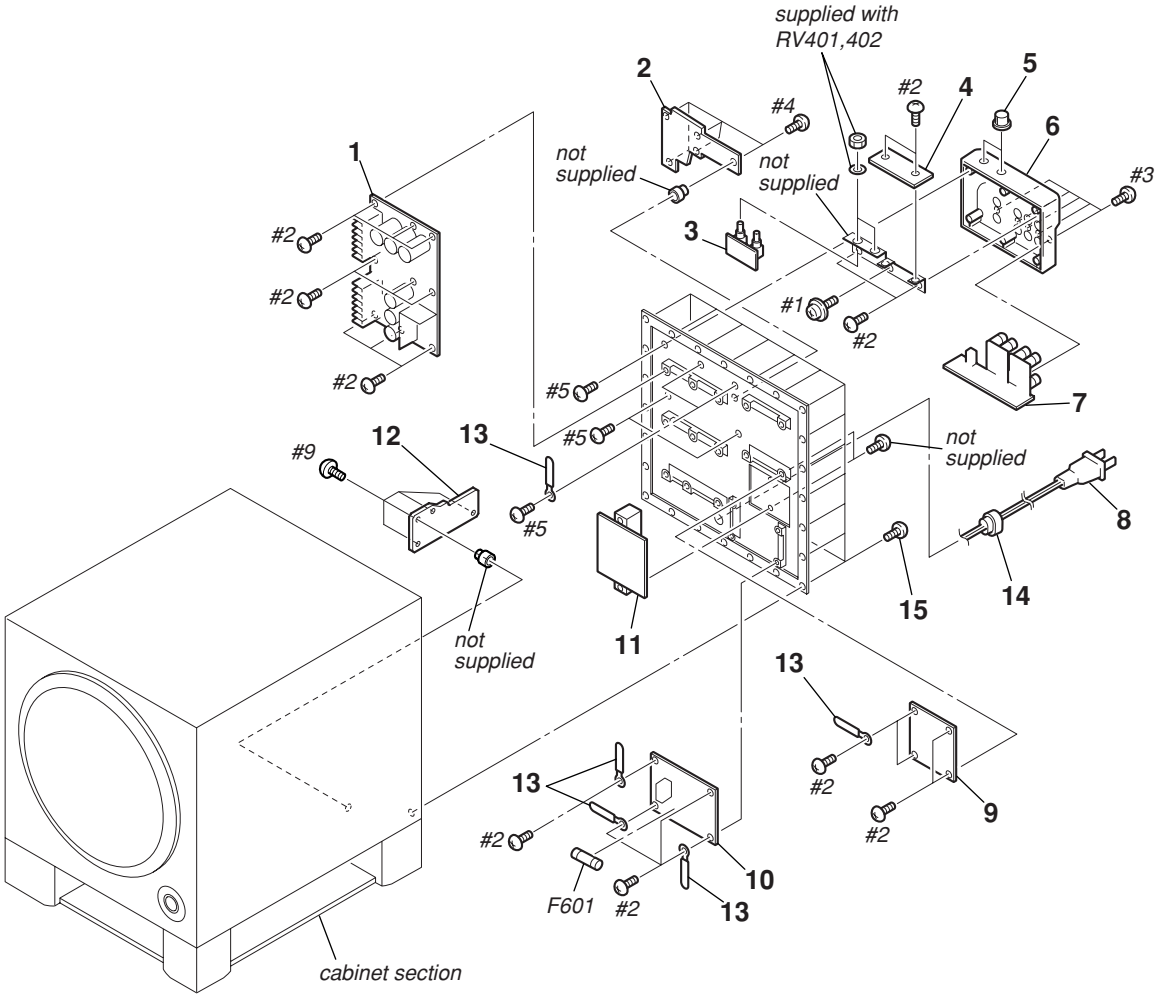
SECTION 3
EXPLODED VIEWS

NOTE :
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) … (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

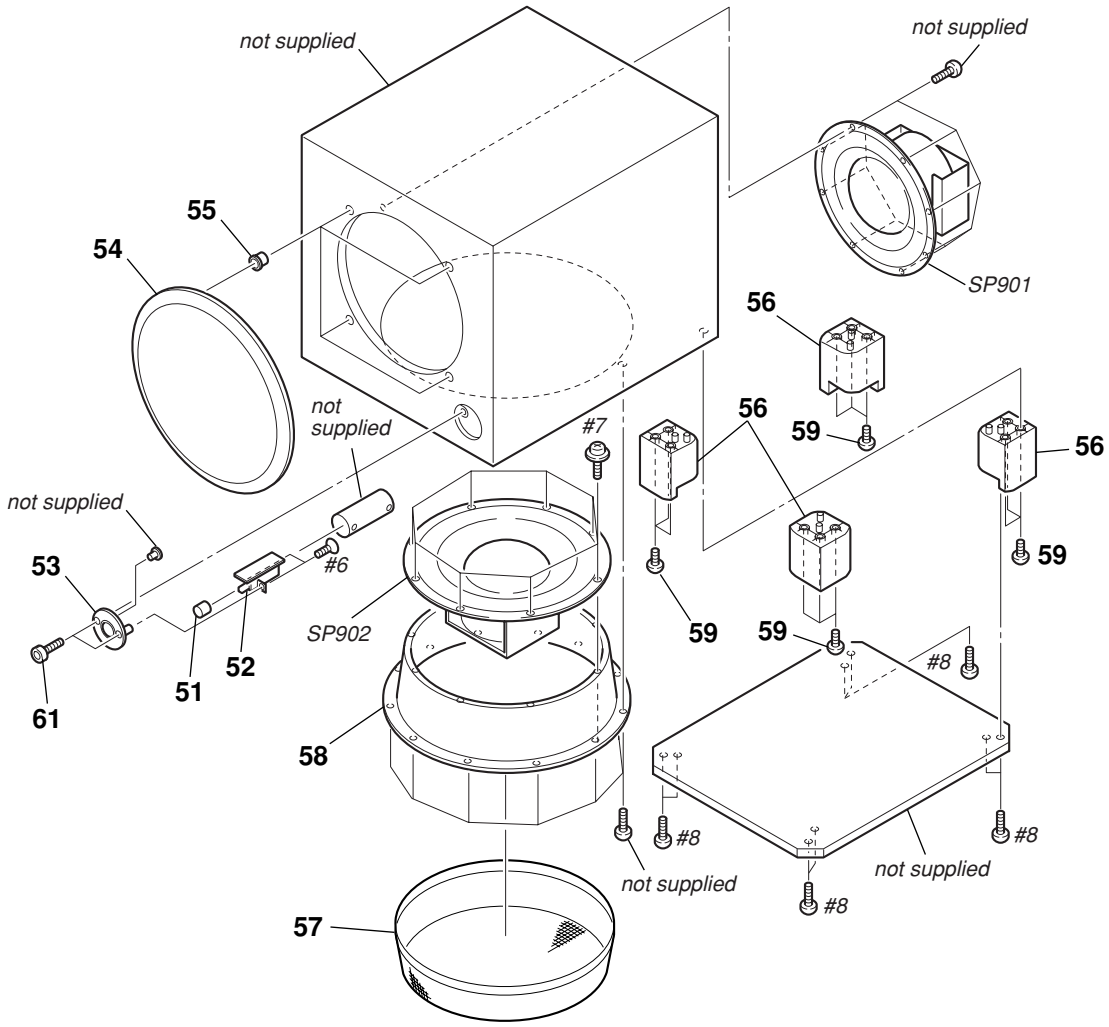
3-1. AMP SECTION



Ref. No.	Part No.	Description	Remark
⚠1	1-468-800-11	REGULATOR, SW (AEP,UK)	
⚠1	1-468-801-11	REGULATOR, SW (US,CND)	
2	1-860-440-11	FILTER BOARD	
3	1-860-442-11	CONTROL BOARD	
4	1-860-441-11	SWITCH BOARD	
5	4-228-138-01	KNOB (VOL)	
6	4-246-152-11	PANEL, CONTROL	
7	1-860-439-11	INPUT BOARD	
⚠8	1-696-570-21	CORD, POWER (UK)	
⚠8	1-769-744-52	CORD, POWER (AEP)	
⚠8	1-783-531-11	CORD, POWER (US,CND)	
9	1-860-445-11	PROTECT BOARD	

Ref. No.	Part No.	Description	Remark
10	1-860-444-11	AUTO POWER BOARD	
11	1-805-531-11	ICE1000A-IC, MODULE (HYBRID IC)	
12	1-861-094-11	LINE FILTER BOARD	
* 13	3-703-150-11	CLAMP	
14	3-703-244-00	BUSHING (2104), CORD	
15	4-238-408-11	SCREW (1) (4X25), +BV TAPPING	
⚠F601	1-532-389-32	FUSE (T0.5AL/250V)	
#1	7-685-872-09	SCREW +BVTT 3X8 (S)	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-874-09	SCREW +BVTT 3X12 (S)	
#4	7-685-876-09	SCREW +BVTT 3X16 (S)	
#5	7-685-884-09	SCREW +BVTT 4X14 (S)	
#9	7-682-554-09	SCREW +B 3X25	

3-2. CABINET SECTION



Ref. No.	Part No.	Description	Remark
51	4-246-147-01	KNOB, PUSH	
52	1-860-443-11	POWER SW BOARD	
53	4-246-155-01	PANEL, SWITCH	
54	X-4955-983-1	FRAME ASSY, GRILLE (BLACK) (US,CND,AEP)	
54	X-4956-055-1	FRAME ASSY, GRILLE (MAPLE) (AEP,UK)	
55	4-210-830-01	CATCHER	
56	4-250-937-01	FOOT	
57	4-250-898-01	GRILLE	

Ref. No.	Part No.	Description	Remark
58	4-250-897-01	BASE, UNIT	
59	4-238-408-11	SCREW (1) (4X25), +BV TAPPING	
61	4-235-903-01	SCREW (3.5X20)	
SP901	1-825-374-11	SPEAKER (30cm) (FRONT)	
SP902	1-825-374-11	SPEAKER (30cm) (BOTTOM)	
#6	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#7	7-682-576-09	SCREW +P 5X12	
#8	7-682-566-09	SCREW +B 4X20	

SECTION 4
ELECTRICAL PARTS LIST

AUTO POWER

NOTE :

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ , for example :
  uA.... : µ A.... , uPA.... : µ PA....
  uPB.... : µ PB.... , uPC.... : µ PC....
  uPD.... : µ PD....
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  CND : Canadian model

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
	1-860-444-11	AUTO POWER BOARD **********			
	1-533-233-11	FUSE HOLDER			
		< CAPACITOR >			
⚠C601	1-113-916-11	CERAMIC	0.01uF	20%	250V
⚠C603	1-119-884-51	CERAMIC	100PF	10%	250V
⚠C605	1-113-924-11	CERAMIC	0.0047uF	20%	250V
⚠C606	1-117-915-11	FILM	0.1uF	10%	275V
⚠C607	1-107-670-11	ELECT	10uF	20%	400V
⚠C608	1-164-159-21	CERAMIC	0.1uF		50V
⚠C609	1-107-974-41	CERAMIC	47PF	5%	2KV
⚠C610	1-126-964-11	ELECT	10uF	20%	50V
C611	1-126-941-11	ELECT	470uF	20%	25V
C612	1-126-941-11	ELECT	470uF	20%	25V
C613	1-164-159-21	CERAMIC	0.1uF		50V
C614	1-164-159-21	CERAMIC	0.1uF		50V
C615	1-126-964-11	ELECT	10uF	20%	50V
C616	1-126-964-11	ELECT	10uF	20%	50V
C617	1-104-666-11	ELECT	220uF	20%	25V
C618	1-104-666-11	ELECT	220uF	20%	25V
C619	1-164-159-21	CERAMIC	0.1uF		50V
C620	1-164-159-21	CERAMIC	0.1uF		50V
C621	1-126-233-11	ELECT	22uF	20%	50V
C622	1-126-940-11	ELECT	330uF	20%	16V
C623	1-126-963-11	ELECT	4.7uF	20%	50V
C624	1-164-159-21	CERAMIC	0.1uF		50V
C625	1-164-159-21	CERAMIC	0.1uF		50V
C626	1-164-159-21	CERAMIC	0.1uF		50V
C627	1-164-159-21	CERAMIC	0.1uF		50V
⚠C628	1-119-886-51	CERAMIC	470PF	10%	250V (AEP,UK)
⚠C628	1-119-887-51	CERAMIC	0.01uF	20%	250V (US,CND)
⚠C629	1-119-886-51	CERAMIC	470PF	10%	250V (AEP,UK)
⚠C629	1-119-887-51	CERAMIC	0.01uF	20%	250V (US,CND)
C630	1-126-961-11	ELECT	2.2uF	20%	50V
		< CONNECTOR >			
CN601	1-818-216-11	PIN, CONNECTOR 2P			
* CN602	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
CN603	1-793-873-11	PIN, CONNECTOR (B02(12.4)P-VL)			
* CN605	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN606	1-564-506-11	PLUG, CONNECTOR 3P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
⚠D601	6-500-675-01	DIODE DBD10G			
D602	8-719-991-33	DIODE 1SS133T-77			
⚠D603	8-719-109-97	DIODE RD6.8ESB2			
⚠D604	8-719-991-33	DIODE 1SS133T-77			
D605	8-719-991-33	DIODE 1SS133T-77			
D606	8-719-991-33	DIODE 1SS133T-77			
D607	8-719-921-88	DIODE MTZJ-13B			
D608	8-719-921-88	DIODE MTZJ-13B			
D609	8-719-991-33	DIODE 1SS133T-77			
D610	8-719-991-33	DIODE 1SS133T-77			
D611	8-719-991-33	DIODE 1SS133T-77			
D612	8-719-991-33	DIODE 1SS133T-77			
D613	8-719-991-33	DIODE 1SS133T-77			
		< GROUND TERMINAL >			
EP601	1-537-770-21	TERMINAL BOARD, GROUND			
EP602	1-537-770-21	TERMINAL BOARD, GROUND			
		< FUSE >			
⚠F601	1-532-389-32	FUSE (T0.5AL/250V)			
		< FERRITE BEAD >			
FB601	1-412-473-21	INDUCTOR 0uH			
FB602	1-412-473-21	INDUCTOR 0uH			
		< IC >			
⚠IC601	6-704-363-01	IC MIP0253SPSCF			
IC602	8-759-076-15	IC KIA4558P			
		< COIL >			
⚠L601	1-456-589-11	COIL, LINE FILTER			
		< TRANSISTOR >			
⚠Q601	8-729-036-89	TRANSISTOR KTC3198GR-A			
Q602	8-729-036-89	TRANSISTOR KTC3198GR-A			
Q603	8-729-037-03	TRANSISTOR KTA1266GR-AT			
Q604	8-729-029-86	TRANSISTOR DTC124ESA			
Q605	6-550-640-01	TRANSISTOR KTA1267			
Q606	8-729-029-86	TRANSISTOR DTC124ESA			
Q607	8-729-029-40	TRANSISTOR DTA124ESA			
Q608	8-729-029-40	TRANSISTOR DTA124ESA			
		< RESISTOR >			
⚠R601	1-219-237-11	SOLID 3.3M		20%	1/2W

AUTO POWER CONTROL FILTER

Ref. No.	Part No.	Description			Remark
R602	1-249-418-11	CARBON	1.2K	5%	1/4W F
R603	1-249-393-11	CARBON	10	5%	1/4W F
⚠R604	1-249-409-11	CARBON	220	5%	1/4W F
⚠R605	1-249-420-11	CARBON	1.8K	5%	1/4W F
R606	1-249-393-11	CARBON	10	5%	1/4W F
R607	1-249-393-11	CARBON	10	5%	1/4W F
R608	1-249-421-11	CARBON	2.2K	5%	1/4W F
R609	1-249-421-11	CARBON	2.2K	5%	1/4W F
R610	1-249-417-11	CARBON	1K	5%	1/4W F
R611	1-247-895-91	CARBON	470K	5%	1/4W
R612	1-249-417-11	CARBON	1K	5%	1/4W F
R613	1-249-441-11	CARBON	100K	5%	1/4W
R614	1-249-437-11	CARBON	47K	5%	1/4W
R615	1-249-433-11	CARBON	22K	5%	1/4W
R616	1-249-433-11	CARBON	22K	5%	1/4W
R617	1-249-441-11	CARBON	100K	5%	1/4W
R618	1-247-903-00	CARBON	1M	5%	1/4W
R619	1-249-433-11	CARBON	22K	5%	1/4W
R620	1-249-416-11	CARBON	820	5%	1/4W F
R621	1-249-421-11	CARBON	2.2K	5%	1/4W F
R622	1-249-421-11	CARBON	2.2K	5%	1/4W F
R623	1-249-421-11	CARBON	2.2K	5%	1/4W F
		< RELAY >			
⚠RY601	1-755-513-11	RELAY			
		< TRANSFORMER >			
⚠T601	1-439-873-11	TRANSFORMER, DC CONVERTER			

****

	1-860-442-11	CONTROL BOARD			
		**********			
		< CONNECTOR >			
CN401	1-564-723-11	PIN, CONNECTOR (SMALL TYPE) 7P			
		< RESISTOR >			
R401	1-249-421-11	CARBON	2.2K	5%	1/4W F
R402	1-249-421-11	CARBON	2.2K	5%	1/4W F
R403	1-249-437-11	CARBON	47K	5%	1/4W
R404	1-249-437-11	CARBON	47K	5%	1/4W
		< VARIABLE RESISTOR >			
RV401	1-227-588-11	RES, VAR (LEVEL)			
RV402	1-227-605-11	RES, VAR 20K/20K (CUT OFF FREQUENCY)			

****

	1-860-440-11	FILTER BOARD			
		**********			
		< CAPACITOR >			
C201	1-164-070-11	CERAMIC	100PF	5%	50V
C202	1-126-964-11	ELECT	10uF	20%	50V
C203	1-126-964-11	ELECT	10uF	20%	50V
C204	1-136-177-00	MYLAR	1uF	5%	50V
C205	1-136-177-00	MYLAR	1uF	5%	50V
C206	1-136-173-00	MYLAR	0.47uF	5%	50V
C207	1-136-173-00	MYLAR	0.47uF	5%	50V
C208	1-162-294-31	CERAMIC	0.001uF	10%	50V
C209	1-136-177-00	MYLAR	1uF	5%	50V
C210	1-136-177-00	MYLAR	1uF	5%	50V

Ref. No.	Part No.	Description			Remark
C211	1-162-294-31	CERAMIC	0.001uF	10%	50V
C212	1-136-168-00	MYLAR	0.18uF	5%	50V
C213	1-136-171-00	MYLAR	0.33uF	5%	50V
C214	1-136-167-00	MYLAR	0.15uF	5%	50V
C215	1-136-175-00	MYLAR	0.68uF	5%	50V
C216	1-136-157-00	MYLAR	0.022uF	5%	50V
C218	1-136-250-11	FILM	0.001uF	5%	100V
C219	1-136-252-00	FILM	0.0015uF	5%	100V
C220	1-126-964-11	ELECT	10uF	20%	50V
C221	1-136-153-00	FILM	0.01uF	5%	50V
C222	1-136-153-00	FILM	0.01uF	5%	50V
C223	1-126-964-11	ELECT	10uF	20%	50V
C230	1-126-964-11	ELECT	10uF	20%	50V
C231	1-126-964-11	ELECT	10uF	20%	50V
C232	1-164-159-21	CERAMIC	0.1uF		50V
C234	1-164-159-21	CERAMIC	0.1uF		50V
C235	1-126-964-11	ELECT	10uF	20%	50V
C236	1-126-964-11	ELECT	10uF	20%	50V
C237	1-164-159-21	CERAMIC	0.1uF		50V
C238	1-164-159-21	CERAMIC	0.1uF		50V
C239	1-164-159-21	CERAMIC	0.1uF		50V
C240	1-164-159-21	CERAMIC	0.1uF		50V
C241	1-164-159-21	CERAMIC	0.1uF		50V
C242	1-164-159-21	CERAMIC	0.1uF		50V
C243	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN201	1-564-508-11	PLUG, CONNECTOR 5P			
* CN203	1-506-946-11	PIN, CONNECTOR 4P			
CN204	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
* CN205	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
* CN206	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
		< DIODE >			
D201	8-719-991-33	DIODE 1SS133T-77			
D202	8-719-991-33	DIODE 1SS133T-77			
D203	8-719-991-33	DIODE 1SS133T-77			
D204	8-719-991-33	DIODE 1SS133T-77			
D205	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC201	8-759-076-15	IC KIA4558P			
IC202	8-759-076-15	IC KIA4558P			
IC203	8-759-076-15	IC KIA4558P			
IC204	8-759-076-15	IC KIA4558P			
IC205	8-759-076-15	IC KIA4558P			
IC206	8-759-145-58	IC BA4558			
IC207	8-759-932-33	IC BU4066BC			
		< TRANSISTOR >			
Q201	8-729-016-42	TRANSISTOR KTC3199GR-TP			
Q202	8-729-016-42	TRANSISTOR KTC3199GR-TP			
Q203	6-550-640-01	TRANSISTOR KTA1267			
Q204	8-729-016-42	TRANSISTOR KTC3199GR-TP			
		< RESISTOR >			
R201	1-249-429-11	CARBON	10K	5%	1/4W

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FILTER INPUT LINE FILTER

Ref. No.	Part No.	Description			Remark
R202	1-249-429-11	CARBON	10K	5%	1/4W
R203	1-249-427-11	CARBON	6.8K	5%	1/4W F
R204	1-249-429-11	CARBON	10K	5%	1/4W
R205	1-249-429-11	CARBON	10K	5%	1/4W
R206	1-249-437-11	CARBON	47K	5%	1/4W
R207	1-249-437-11	CARBON	47K	5%	1/4W
R208	1-249-429-11	CARBON	10K	5%	1/4W
R209	1-249-429-11	CARBON	10K	5%	1/4W
R210	1-249-393-11	CARBON	10	5%	1/4W F
R211	1-249-429-11	CARBON	10K	5%	1/4W
R213	1-249-425-11	CARBON	4.7K	5%	1/4W F
R214	1-247-843-11	CARBON	3.3K	5%	1/4W
R215	1-249-393-11	CARBON	10	5%	1/4W F
R216	1-249-417-11	CARBON	1K	5%	1/4W F
R217	1-249-439-11	CARBON	68K	5%	1/4W
R218	1-249-417-11	CARBON	1K	5%	1/4W F
R219	1-249-429-11	CARBON	10K	5%	1/4W
R220	1-249-427-11	CARBON	6.8K	5%	1/4W F
R221	1-249-415-11	CARBON	680	5%	1/4W F
R222	1-249-441-11	CARBON	100K	5%	1/4W
R223	1-249-417-11	CARBON	1K	5%	1/4W F
R224	1-249-429-11	CARBON	10K	5%	1/4W
R225	1-249-425-11	CARBON	4.7K	5%	1/4W F
R226	1-249-426-11	CARBON	5.6K	5%	1/4W
R229	1-249-417-11	CARBON	1K	5%	1/4W F
R230	1-249-437-11	CARBON	47K	5%	1/4W
R231	1-249-437-11	CARBON	47K	5%	1/4W
R232	1-249-437-11	CARBON	47K	5%	1/4W
R233	1-249-431-11	CARBON	15K	5%	1/4W
R234	1-249-421-11	CARBON	2.2K	5%	1/4W F
R240	1-249-429-11	CARBON	10K	5%	1/4W
R241	1-249-429-11	CARBON	10K	5%	1/4W
R242	1-249-407-11	CARBON	150	5%	1/4W F
R244	1-249-441-11	CARBON	100K	5%	1/4W
R245	1-249-429-11	CARBON	10K	5%	1/4W
R246	1-249-429-11	CARBON	10K	5%	1/4W
R247	1-249-437-11	CARBON	47K	5%	1/4W
R248	1-249-437-11	CARBON	47K	5%	1/4W
R249	1-249-433-11	CARBON	22K	5%	1/4W
R250	1-249-431-11	CARBON	15K	5%	1/4W
R251	1-249-433-11	CARBON	22K	5%	1/4W
R252	1-249-435-11	CARBON	33K	5%	1/4W
R253	1-249-425-11	CARBON	4.7K	5%	1/4W F
R254	1-249-437-11	CARBON	47K	5%	1/4W
R255	1-249-437-11	CARBON	47K	5%	1/4W
R256	1-249-430-11	CARBON	12K	5%	1/4W

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1-860-439-11 INPUT BOARD
****

< CAPACITOR >

C101	1-162-286-31	CERAMIC	220PF	10%	50V
C102	1-162-286-31	CERAMIC	220PF	10%	50V
C103	1-162-286-31	CERAMIC	220PF	10%	50V
C104	1-162-286-31	CERAMIC	220PF	10%	50V
C105	1-126-964-11	ELECT	10uF	20%	50V
C106	1-164-035-11	CERAMIC	47PF	5%	50V
C108	1-126-964-11	ELECT	10uF	20%	50V
C109	1-126-964-11	ELECT	10uF	20%	50V
C110	1-164-159-21	CERAMIC	0.1uF		50V
C111	1-164-159-21	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D101	8-719-991-33	DIODE 1SS133T-77			
D102	8-719-991-33	DIODE 1SS133T-77			
D103	8-719-991-33	DIODE 1SS133T-77			
D104	8-719-991-33	DIODE 1SS133T-77			
D105	8-719-991-33	DIODE 1SS133T-77			
D106	8-719-991-33	DIODE 1SS133T-77			
		< IC >			
IC101	8-759-145-58	IC BA4558			
		< JACK >			
J101	1-815-749-11	JACK, PIN 2P (LINE)			
		< COIL >			
L101	1-424-102-11	COIL, LINE FILTER			
		< RESISTOR >			
R101	1-260-107-11	CARBON	4.7K	5%	1/2W
R102	1-260-107-11	CARBON	4.7K	5%	1/2W
R103	1-249-437-11	CARBON	47K	5%	1/4W
R104	1-249-437-11	CARBON	47K	5%	1/4W
R105	1-249-433-11	CARBON	22K	5%	1/4W
R106	1-249-433-11	CARBON	22K	5%	1/4W
R107	1-249-433-11	CARBON	22K	5%	1/4W
R108	1-249-433-11	CARBON	22K	5%	1/4W
R109	1-249-421-11	CARBON	2.2K	5%	1/4W F
R110	1-249-421-11	CARBON	2.2K	5%	1/4W F
R111	1-249-417-11	CARBON	1K	5%	1/4W F
R112	1-249-417-11	CARBON	1K	5%	1/4W F
R114	1-249-441-11	CARBON	100K	5%	1/4W
		< TERMINAL >			
TM101	1-537-737-11	TERMINAL BOARD (SPEAKER)			

****

1-861-094-11 LINE FILTER BOARD
****

< CAPACITOR >

⚠C701	1-125-935-51	FILM	0.47uF	10%	275V (US,CND)
⚠C701	1-117-916-51	FILM	0.22uF	10%	275V (AEP,UK)

< CONNECTOR >

CN701	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH)2P
CN702	1-818-216-11	PIN, CONNECTOR 2P

< COIL >

⚠L701	1-456-759-11	COIL, LINE FILTER (US,CND)
⚠L701	1-456-760-11	COIL, LINE FILTER (AEP,UK)
⚠L702	1-456-759-11	COIL, LINE FILTER (US,CND)
⚠L702	1-456-760-11	COIL, LINE FILTER (AEP,UK)

< RESISTOR >

⚠R701	1-219-237-11	SOLID	3.3M	20%	1/2W

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POWER SW | PROTECT | SWITCH

Ref. No.	Part No.	Description			Remark
	1-860-443-11	POWER SW BOARD			
		**********			
		< CAPACITOR >			
⚠C801	1-113-916-11	CERAMIC	0.01uF	20%	250V
		< CONNECTOR >			
* CN501	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
* CN801	1-568-226-11	PIN, CONNECTOR(3.96mm PITCH) 2P			
		< DIODE >			
D501	8-719-025-62	DIODE SML1216W (ON/STANDBY)			
		< SWITCH >			
⚠SW801	1-554-920-61	SWITCH, PUSH (AC POWER)(1 KEY) (POWER)			
**********					
	1-860-445-11	PROTECT BOARD			
		**********			
		< CAPACITOR >			
C902	1-126-968-11	ELECT	100uF	20%	50V
C903	1-126-968-11	ELECT	100uF	20%	35V
C904	1-104-665-11	ELECT	100uF	20%	16V
C905	1-104-665-11	ELECT	100uF	20%	16V
C906	1-164-159-21	CERAMIC	0.1uF		50V
C907	1-164-159-21	CERAMIC	0.1uF		50V
C908	1-126-964-11	ELECT	10uF	20%	50V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-104-665-11	ELECT	100uF	20%	16V
C911	1-104-665-11	ELECT	100uF	20%	16V
C912	1-164-159-21	CERAMIC	0.1uF		50V
C913	1-164-159-21	CERAMIC	0.1uF		50V
C920	1-104-666-11	ELECT	220uF	20%	25V
C921	1-104-666-11	ELECT	220uF	20%	25V
C922	1-164-159-21	CERAMIC	0.1uF		50V
C923	1-164-159-21	CERAMIC	0.1uF		50V
C924	1-126-961-11	ELECT	2.2uF	20%	50V
C925	1-164-159-21	CERAMIC	0.1uF		50V
C926	1-164-159-21	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN901	1-564-242-00	PIN, CONNECTOR(3.96mm PITCH) 5P			
CN902	1-818-081-11	PIN, CONNECTOR			
CN903	1-818-082-11	PIN, CONNECTOR			
CN904	1-564-506-11	PLUG, CONNECTOR 3P			
* CN907	1-506-946-11	PIN, CONNECTOR 4P			
		< DIODE >			
D902	8-719-991-33	DIODE 1SS133T-77			
D903	8-719-991-33	DIODE 1SS133T-77			
D904	8-719-970-02	DIODE 1SR139-400			
D905	8-719-970-02	DIODE 1SR139-400			
D906	8-719-921-75	DIODE MTZN-10B			
D907	8-719-921-75	DIODE MTZN-10B			
D908	8-719-970-02	DIODE 1SR139-400			
		< GROUND TERMINAL >			
EP901	1-537-770-21	TERMINAL BOARD, GROUND			

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q901	6-550-660-01	TRANSISTOR	KTC3206-O			
Q902	6-550-660-01	TRANSISTOR	KTC3206-O			
Q903	6-550-660-01	TRANSISTOR	KTC3206-O			
Q904	8-729-029-86	TRANSISTOR	DTC124ESA			
Q905	8-729-029-86	TRANSISTOR	DTC124ESA			
Q906	8-729-036-89	TRANSISTOR	KTC3198GR-A			
Q907	8-729-037-03	TRANSISTOR	KTA1266GR-AT			
Q908	6-550-660-01	TRANSISTOR	KTC3206-O			
Q909	8-729-016-42	TRANSISTOR	KTC3199GR-TP			
Q910	8-729-016-42	TRANSISTOR	KTC3199GR-TP			
Q911	6-550-660-01	TRANSISTOR	KTC3206-O			
		< RESISTOR >				
R902	1-247-887-00	CARBON	220K	5%	1/4W	
R903	1-247-885-00	CARBON	180K	5%	1/4W	
R904	1-249-437-11	CARBON	47K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-433-11	CARBON	22K	5%	1/4W	
R907	1-247-887-00	CARBON	220K	5%	1/4W	
R908	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R909	1-215-897-21	METAL OXIDE	6.8K	5%	2W	
R910	1-249-429-11	CARBON	10K	5%	1/4W	
R911	1-249-393-11	CARBON	10	5%	1/4W	F
R912	1-249-393-11	CARBON	10	5%	1/4W	F
R913	1-249-417-11	CARBON	1K	5%	1/4W	F
R914	1-249-417-11	CARBON	1K	5%	1/4W	F
R915	1-249-417-11	CARBON	1K	5%	1/4W	F
R916	1-249-417-11	CARBON	1K	5%	1/4W	F
R919	1-249-441-11	CARBON	100K	5%	1/4W	F
R920	1-249-437-11	CARBON	47K	5%	1/4W	
R921	1-249-429-11	CARBON	10K	5%	1/4W	
R922	1-249-437-11	CARBON	47K	5%	1/4W	
R923	1-249-429-11	CARBON	10K	5%	1/4W	
R924	1-249-441-11	CARBON	100K	5%	1/4W	F
R925	1-249-417-11	CARBON	1K	5%	1/4W	F
R926	1-249-417-11	CARBON	1K	5%	1/4W	F
R927	1-215-897-21	METAL OXIDE	6.8K	5%	2W	
R928	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< RELAY >				
RY901	1-755-512-11	RELAY				
RY902	1-755-512-11	RELAY				
**********						
	1-860-441-11	SWITCH BOARD				
		**********				
		< CONNECTOR >				
CN301	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P				
* CN302	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P				
		< RESISTOR >				
R301	1-249-433-11	CARBON	22K	5%	1/4W	
R302	1-249-433-11	CARBON	22K	5%	1/4W	

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Ref. No.	Part No.	Description	Remark
		< SWITCH >	
SW301	1-554-481-00	SWITCH, SLIDE (PHASE)	
SW302	1-554-481-00	SWITCH, SLIDE (POWER SAVE)	
SW303	1-554-481-00	SWITCH, SLIDE (MODE)	
SW304	1-571-908-11	SWITCH, SLIDE (BASS-BOOST)	
**********			
		MISCELLANEOUS	
		**********	
⚠1	1-468-800-11	REGULATOR, SW (AEP,UK)	
⚠1	1-468-801-11	REGULATOR, SW (US,CND)	
⚠8	1-696-570-21	CORD, POWER (UK)	
⚠8	1-769-744-52	CORD, POWER (AEP)	
⚠8	1-783-531-11	CORD, POWER (US,CND)	
11	1-805-531-11	ICE1000A-IC, MODULE (HYBRID IC)	
⚠F601	1-532-389-32	FUSE (T0.5AL/250V)	
SP901	1-825-374-11	SPEAKER (30cm) (FRONT)	
SP902	1-825-374-11	SPEAKER (30cm) (BOTTOM)	
**********			
		ACCESSORIES	
		**********	
	1-751-598-43	CORD, CONNECTION (PIN-PIN)	
	1-791-467-21	CORD, SPEAKER	
	4-250-083-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH)	
	4-250-083-21	MANUAL, INSTRUCTION (SPANISH)	(US,CND,AEP)
	4-250-083-31	MANUAL, INSTRUCTION (GERMAN, DUTCH)	(AEP)
	4-250-083-41	MANUAL, INSTRUCTION (ITALIAN, SWEDISH)	(AEP)
	4-250-083-51	MANUAL, INSTRUCTION (POLISH, RUSSIAN)	(AEP)
	4-251-304-01	SPIKE	

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REVISION HISTORY

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Ver.	Date	Description of Revision
1.0	2003.10	New
1.1	2004.05	Change of the electrical parts. Addition of the electrical parts. (ENG-04002) Change of the supply classification of the screw. (ENG-04003)
1.2	2005.07	Change of the part No. of Ref. No. 6. (SPM-05048)